

WHAT IS CLAIMED IS:

1. A conductive belt comprising a base layer electroconductive and made of a resin, an intermediate layer ionic-conductive and made of an elastomer, and a surface
5 coating layer,

wherein a tensile modulus of elasticity of said base layer is set to not less than 500 Mpa, and a volume electric resistance value thereof is adjusted to not less than $10^6 \Omega \cdot \text{cm}$ nor more than $10^{11} \Omega \cdot \text{cm}$ by adding an electroconductive
10 agent to said resin; and

said intermediate layer to be formed on an upper surface of said base layer has a JIS A hardness less than 70, a thickness not less than $50 \mu\text{m}$ nor more than $600 \mu\text{m}$, and a volume electric resistance value not less than $10^8 \Omega \cdot \text{cm}$ nor
15 more than $10^{14} \Omega \cdot \text{cm}$.

2. The conductive belt according to claim 1, wherein said intermediate layer is composed of a polyurethane elastomer formed by hardening a isocyanate-terminated prepolymer obtained from a polyol containing polypropylene
20 glycol or/and a hydroxyl-terminated liquid rubber as a main component thereof and aromatic diisocyanate with aromatic diamine or/and a polyol,

said surface coating layer is made of a rubber, an elastomer, or a resin.

25 3. The conductive belt according to claim 2, wherein

said isocyanate-terminated prepolymer is formed by mixing a reactant of polypropylene glycol and aromatic diisocyanate with a reactant of polyol containing a hydroxyl-terminated liquid rubber as a main component thereof and said aromatic
5 diisocyanate.

4. The conductive belt according to claim 1, wherein a thickness of said base layer is set to not less than $20\mu\text{m}$ nor more than $400\mu\text{m}$; and said surface coating layer is non-electroconductive, has a thickness of not less than $1\mu\text{m}$ nor
10 more than $50\mu\text{m}$; and a volume electric resistance value of not less than $10^{10}\Omega\cdot\text{cm}$ nor more than $10^{15}\Omega\cdot\text{cm}$.

5. The conductive belt according to claim 1, wherein an electroconductivity is auxiliarily imparted to said intermediate layer ionic-conductive and made of said
15 elastomer by adding an electroconductive agent to said elastomer,

supposing that a volume electric resistance value of said intermediate layer to which said electroconductivity is auxiliarily imparted is indicated by R at a voltage of 500V,
20 a temperature of 23°C , and a relative humidity of 55%; a volume electric resistance value of said intermediate layer not containing said electroconductive agent is indicated by R1 at the voltage of 500V, the temperature of 23°C , and the relative humidity of 55%; and $\text{Log}(R) - \text{Log}(R1) = \text{Log}(R2)$,

25 said electroconductive agent is auxiliarily added to

said elastomer in a condition of $0.1 \leq \text{Log}(R2) \leq 5$.

6. The conductive belt according to claim 1, wherein said intermediate layer contains a reactive flame-retardant compound.

5 7. The conductive belt according to claim 1, wherein said conductive belt is formed as a seamless belt that is used as an intermediate transfer belt of a copying apparatus, a printer, and a facsimile.

10 8. The conductive belt according to claim 1, wherein said base layer is composed of a centrifugally molded seamless belt substrate; said intermediate layer is formed on a surface of said base layer by applying a material to said surface of said base layer and hardening said material; and said surface coating layer is formed on a surface of
15 said intermediate layer by applying a material to said surface of said intermediate layer and hardening said material.

20 9. The conductive belt according to claim 1, wherein said base layer is composed of a seamless belt substrate by applying said seamless belt substrate by a dispenser and drying and hardening said seamless belt substrate while said seamless belt substrate is being rotated; said intermediate layer is formed by applying a material to a surface of said base layer by said dispenser and drying and hardening said
25 material while said material is being rotated; and said

surface coating layer is formed on a surface of said intermediate layer by applying a material to said surface of said intermediate layer and hardening said material.